

HISTORICAL SUPPLEMENT

The articles in this supplement have been specially written by members of Glasgow Natural History Society as part of the celebrations of the Society's 150th Anniversary. They provide both a record of the Society since its earliest days and personal reminiscences of some of the Society's activities and prominent members. The editor is very grateful for the work the writers have put into this task. I am especially indebted to Norman Tait for his expert preparation of the illustrations.

150 YEARS OF GLASGOW NATURAL HISTORY SOCIETY (With Appendix 1, Historical articles published in the *Glasgow Naturalist* Appendix 2, Presidents, Editors, Secretaries and Treasurers since 1951)

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INTRODUCTION

The last time that the Society took stock of itself was the Centenary celebrations of 1951. These are described in the *Glasgow Naturalist* volume 17, part 1, published in 1951, and they make interesting reading. The main event was a month-long exhibition in Kelvingrove Museum, accompanied by film shows, lectures, excursions and a Thanksgiving Service in Glasgow Cathedral. The Society was then the Glasgow and Andersonian Natural History and Microscopical Society, the somewhat cumbersome name being the legacy of a complex history of amalgamations (see Richard Sutcliffe's historical review Ps 61-): the 100th anniversary of the Society's founding was justified by the Minutes of the inaugural meeting of one of the current Society's antecedents, the Natural History Society of Glasgow, held in the Temperance Hotel on 2nd July, 1851. The exhibition was a major affair, filling 39 cases and screens, and covering all the main sections of the Society's activities: botany (8 cases), microscopy (3), entomology (2), ornithology (5), zoology (5), geology (5), photography (3), and a miscellaneous set of cases on history, methods etc. (6). The *Glasgow Naturalist* republished John Lee's brief history of the Society, the President's introduction and a list of past Presidents, all from the exhibition catalogue and added a factual resumé of the natural history societies of Glasgow (by Donald Patton) and summaries of the public lecture and thanksgiving oration.

Fifty years on, the Society's Council has planned a rather different programme to celebrate our 150th anniversary. No-one suggested a church service (a comment on the growing secularisation of modern society?); we thought that to produce an exhibition to a sufficient standard would be too

much work (a comment on busier lives? Or on higher expectations: in 1951, an exhibition could be dried plants in vases; these days, the general public would expect a high standard of presentation, which comes at considerable cost in time and money). We have gone instead for a major symposium on a key topic, linking basic natural history to conservation: the importance to our fauna and flora of alien species. We have also decided to write a more considerable historical review of the Society – its people and its activities as a supplement to the *Glasgow Naturalist*. Through articles in the *Glasgow Naturalist*, the Society has long valued a historical perspective. In appendix 1, I list the articles published in the last 100 years that are mainly historical in scope. The articles in this Supplement provide an update on our history. I hope readers find them as interesting as the writing team did in putting them together. In the remainder of this introduction, I take a look at how developments in GNHS relate to those elsewhere, in science, and in the world at large.

MEMBERSHIP AND SEX RATIO

The inaugural meeting of the Natural History Society of Glasgow was attended by nine 'gentlemen'. A minute of 14th September 1882 recorded approval for a proposal that women should be admitted to the Society, a progressive move for this era. In 1951, the membership was 230 of whom 38% were women. In 1955, the President (Robert Mackechnie) noted that the membership at 260 was the highest ever, but that at 1:4000 of the city's population, this was disappointing. Since then membership has oscillated around the 200 – 300 mark, depending somewhat on the strictness of the treasurer in deleting lapsed members. In 2001, it is 248 with 41% women.

In some ways, it is quite an achievement to maintain membership at this level. GNHS has always attracted both amateur and professional natural historians, but its activities – mainly talks and excursions – are largely to do with self education and the pursuit of a leisure-time enthusiasm. These days there is a high proliferation of competing leisure time attractions (what percentage of the Glasgow population would have owned a television set, or a car in 1951, compared to now?); and even in the field of natural history, there are new organisations competing for members.

Though the Society was initially composed entirely of ‘gentlemen’, women have long played an important role. The Society elected its first female President in 1919, the same year that Lady Astor became the first female Member of Parliament (co-incidence or intent?). Unfortunately, there have been rather few since, only Elsie Conway in the 60’s and Agnes Craib in the 80’s. Only one woman, Mabel Scott, has edited the *Glasgow Naturalist* (Appendix 2). It is a different story if we look at the roll-call of Society Secretaries and Treasurers: perhaps women prefer to take the hard-work back-room jobs and leave the more symbolic front-of-house tasks to mere men?

BALANCE OF INTERESTS

Natural history is a broad church, and the Society maintains a number of specialist sections, each with a convenor, to cater for the particular enthusiasms of members. It would be fair to note, however, that the predominant interest for some time has been Botany. From 1955-1990, the Presidents were all principally amateur or professional botanists, Geoff Hancock (1990-92) being the entomologist who broke the sequence. It will be fascinating to find whether this interest in botany in the Society can survive the sad but seemingly inexorable decline in academic interest in plant ecology and diversity, as seen in staff and student numbers in Scottish Universities. Perhaps it will be in Societies like GNHS that a heritage of interest in plants will be maintained.

For the more popular animal groups, birds especially, it is hard for a generalist society to compete with specialists like the SOC, RSPB and BTO. But, for the zoologist with broader interests, GNHS has much to offer. Geology is another field with strong specialist competition, and GNHS has struggled to maintain an active Geology Section.

Other sections have been devoted to techniques. Photography has long been an enthusiasm for members (see Norman Tait’s account of changing techniques over the years, Ps 80-87); microscopy was an early interest, but as expensive new instrumentation became available, especially the electron microscope, microscopy as a technique went beyond the scope of the interested

amateur. More recently, information technology has changed all our lives: GNHS bought its first computer in 1989, initially to assist with membership lists and the production of newsletters. But computers are ideally suited to the management of voluminous data sets and therefore to biological recording. Richard Weddle (Ps 88-99) recounts how the advent of sophisticated computer software has revolutionised the maintenance and manipulation of our local fauna and flora species lists, compared to the cumbersome methods of the past.

THE WIDER WORLD OF BIOLOGY

The big dates in GNHS history link quite closely to the major events in biological history. The founding of GNHS in 1851 precedes the publication of ‘Origin of Species’ by only 8 years. How quickly did Glasgow’s naturalists become aware that the fundamentals of natural history had been revolutionised? (Answer: probably by 1868 – see later).

Fifty years after the foundation of GNHS, in 1901, Correns, von Tschermak and de Vries had just re-discovered Mendel’s Laws of Heredity, and set up the programme which brought together, by the 1920’s, an understanding of genetics, variation and natural selection: the neo-Darwinian Synthesis.

Our Centenary, 1951, occurred while Watson, Crick, Franklin and Wilkins were getting close to the structure of DNA, famously published by Watson & Crick in *Nature* with the ‘modest’ conclusion “It has not escaped our notice that the specific pairing we have postulated immediately suggests a possible copying mechanism for the genetic material”. Science is occasionally punctuated by fundamental revolutions, and this was one of them, ushering in the set of techniques that have become molecular biology and making possible our rapidly expanding knowledge of genomes: the detailed codes that make up our sets of genes. In the years that we approached our 150th anniversary, the complete genomes of several organisms were published: of the plants, thale cress, *Arabidopsis thaliana* (Walbot, 2000); of the animals, *Caenorhabditis elegans* (The *C. elegans* sequencing consortium, 1998) and *Drosophila melanogaster* (Adams, 2000). Many others, including *Homo sapiens*, are on the way.

What impact have these major advances made on the activities of the Glasgow Naturalists? One way to assess this is to examine how our publications have changed, if at all. The *Glasgow Naturalist* and its predecessors (*Proceedings* and *Transactions*) have played several roles: first, they act as a record of the Society’s activities: short accounts and talks, specimens presented and excursions. In recent years, most of this material has appeared in the Society’s Newsletter rather than in the Journal, except where a lecture has been

a work of substantial scholarship, meriting full publication. Second, they have provided a locus for the publication of new work on natural history, in the form of substantial papers and short notes, primarily as it relates to Scotland. This new work includes new records; ecological investigations; observations on behaviour, distribution, variation; historical changes; historical articles on naturalists and natural history.

In the time that I have been Editor, since 1996, only a single paper has been published that uses molecular methods that would have been unavailable in the past. This was Cameron *et al.*'s (1997) account of orchid colonisation, which used starch gel electrophoresis to analyse isoenzyme differences. A quick perusal of the journal back into the 19th Century tells the same story. Neither the molecular nor the genetic revolutions have made any impact on articles published in the "Glasgow Naturalist". Even the theory of evolution is hardly mentioned: Professor John Young addressed the 1868 AGM on the "present character of zoological research", explaining "the doctrine of Evolution as at present understood, and the mode in which development and genealogical succession are treated as synonymous" (*Proceedings* volume 1, 229). I have not checked the title of every lecture given since, but it does not seem that the Society has often felt the need for an update on the latest theories in biology.

It is apparent that both in its methodology (other than occasional use of recent microscopical methods such as scanning electron microscopy) and in its theoretical foundations, the work presented in the *Glasgow Naturalist* to-day could have as easily been presented a hundred years ago: there is no obvious sign of progress or change.

In many ways, this is not surprising. Basic distribution and recording work require good observation and natural history knowledge, rather than fancy new techniques, and many of the authors of work published in the *Glasgow Naturalist* are well-informed amateurs, rather than professional biologists. For the professionals, the *Glasgow Naturalist* is an excellent place to publish the straightforward local distributional data that other biological sciences journals tend to turn down these days. Nevertheless, I do find it a little disappointing that recent advances in biology make so little impact on what we publish. The modern sciences of Evolutionary Biology and Ecology can both be defined as *scientific* natural history: the seeking of *explanations* for the observations which natural historians make. Medawar (1965), writing before molecular biology had properly begun, had this to say about the 'good ecologist': "An ecologist in the modern style... working to understand the agencies that govern the structure of natural populations in space and time, needs much more than a knowledge of natural history and a map. He must have a good understanding of

population genetics and population dynamics generally, and certainly of animal behaviour; more than that, he must grasp climatic physiology and have a feeling for whatever may concern him among the other conventional disciplines in biology (... immunology and endocrinology). There is no compelling reason why he should be able to talk with relaxed fluency about messenger – RNA, and it is not essential that he should ever have heard of it – though an unreasonable feeling that he 'ought' to know something about it is more likely to be found in a good ecologist than in an indifferent one". An updating of this passage would note that the reasons for the good ecologist to have some knowledge of molecular biology have become ever more compelling (as well as reminding Medawar that ecologists can specialise in plants as well as animals, and be female as well as male). Will this view make more impact on the work of GNHS as the society approaches its 200th year?

Another important strand in modern biology is conservation: the increasing threats to global biodiversity have spawned a new applied science which assesses these threats and attempts to devise procedures for the maintenance of species. *Glasgow Naturalist* has published papers with a conservation emphasis and our 150th Anniversary conference is squarely in this field. However, even conservation has made less impact on the work published by Glasgow's naturalists than might be expected.

One avenue which could lead to GNHS having more interaction with modern biology is through the Society's developing links with the Division of Environmental and Evolutionary Biology in the University of Glasgow. The Society has long had links with the University (many members of staff, mainly in Botany and Zoology, have been prominent members) but these have been strengthened by the location of the GNHS library and all meetings in the Graham Kerr building. As a longer-term result of the Society's 150th Anniversary, it has been decided to use the Blodwen Lloyd Binns bequest (see Downie, 1998 for an account of the bequest) to establish an annual series of prestige lectures in modern natural history, to be delivered jointly to GNHS and the Division of Environmental and Evolutionary Biology. It will be fascinating to see what impact these make on the Society and its activities.

ACKNOWLEDGEMENT

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Cameron, H. M., Dickson, J. H and Hollingsworth, P.M (1997). Colonisation of an urban habitat – native orchids on the University of Glasgow campus. *Glasgow Naturalist* **23(2)**, 5-7.

Downie, J.R. (1998). Sowing the seed: the first 5 years of the Blodwen Lloyd Binns Bequest. *Glasgow Naturalist* **23(3)**, 1-2.

Medawar, P.B. (1965). A biological retrospect. *Nature* **207**, 1327-30.

(also in *The art of the soluble* Pelican Books, 1969).

The *C.elegans* sequencing consortium (1998). Sequence and analysis of the genome of *C. elegans*. *Science* **282**, 2012-18.

Walbot, V. (2000). A green chapter in the book of life. *Nature* **408**, 794-5.

APPENDIX 1 HISTORICAL ARTICLES PUBLISHED IN THE *GLASGOW NATURALIST*

(excluding articles in the *Historical Supplement*
volume 23 (6), 2001)

Anon (1980). Naturalists in Glasgow No. 1: Sir William Jackson Hooker **20**, 24.

Anon (1981). Naturalists in Glasgow No. 2: David Douglas **20**, 122.

Anon (1982). Naturalists in Glasgow No. 3: Thomas Hopkirk **20**, 228.

Anon (1983). Naturalists in Glasgow No. 4: William Hunter **20**, 312.

Anon (1984). Naturalists in Glasgow No. 5: Roger Henney **20**, 388.

Braid, K.W. (1956). Dr James Cargill – an early Aberdeen Botanist **17**, 127-8.

Burns, J.H. (1993). David Ure (1749-1798). "Breadth of Mind and Accuracy of Observation". **22**, 259-75.

Curtis, E. W. (1998). The Natural history of the Glasgow Botanic Gardens: an historical introduction **23(3)**, 43-44.

Dance, S.P. & Reilly, M. (1998). The cautionary tale of Lister's Stromb **23(3)**, 9-15.

Dougall, M. & Dickson, J.H. (1999). The ancient oaks of Cadzow **23(4)**, 29-35.

Farow, G. (2001) – to come.

Ferguson, W. (1902). Reminiscences of the early days of the Natural History Society of Glasgow *Proc. & Trans.* **7 NS** 9-17.

Grist, N.R. (1996). Peter Goodfellow **23(1)**, 57.

Hancock, E.G. (1992). Alexander Patience and his work on woodlice (Crustacea, Isopoda) in the Clyde Area, with a list of recorded species **22**, 133-9.

Maepheron, P. (1982). The doctrine of signatures **20**, 191-210.

Mitchell, J. (1985). The Reverend John Stuart, D.D. (1743-1821) and his contribution to the discovery of Britain's mountain flowers. **21**, 119-25.

Mitchell, J. (1992). Further notes on the Reverend John Stuart's contribution to the discovery of Britain's mountain flowers **22**, 103-5.

Mitchell, J. (1996). The legacy of the Loch Lomondside Wolf **23(1)**, 4-6.

Mitchell, J. (1998). Loch Lomondside depicted and described 1: Myths, marvels and monsters **23(3)**, 5-8.

Mitchell, J. (1999). The legacy of the Loch Lomondside Wolf – additional notes **23(3)**, 59.

Mitchell, J. (1999). Loch Lomondside depicted and described 2. Early maps and map makers **23(4)**, 2-8.

Mitchell, J. (2000). Loch Lomondside depicted and described 3. Early guide books for the scientific tourist **23(5)**, 3-6.

Mitchell, J. (2001) Loch Lomondside depicted and described 4. Early geologists and geomorphologists **23 (6)**, 4-8.

Paterson, J. (1913). Dante and Burns and their use of trees and birds **6**, 70-75.

Sutcliffe, R. (1985). Andersonian Naturalists' Society Centenary **21**, 99-100.

Sutcliffe, R. (1986). A hundred years ago: the Microscopical Society of Glasgow **21**, 125.

Woodward, F.R. (1991). William Buckham Lorrain, amateur malacologist and first vice-president of the Natural History Society of Glasgow **22**, 1-4.

APPENDIX 2 PRESIDENTS, EDITORS, SECRETARIES AND TREASURERS SINCE 1951

Presidents

(N.B. Presidents 1851-1948 are listed in the *Glasgow Naturalist* **17(1)**, 7.)

K.W. Braid	1949-1951
Donald Patton	1952-1954
William J. Cannon	1955
Robert Mackechnie	1955-1960
Basil W. Ribbons	1961-1963
Stephen A. Hutchinson	1964-1966
Elsie Conway	1967-1969
Alfred A.P. Stack	1970-1972
Allan McG. Stirling	1973-1975
James H. Dickson	1976-1978
Peter Macpherson	1979-1981
Agnes Craib	1982-1983
Peter Macpherson	1984-1986
James H. Dickson	1987-1989
E. Geoffrey Hancock	1990-1992
Norman R. Grist	1993-1995
Norman Tait	1996-1998
Robert Gray	1999-2001

Editors

Mabel G. Scott	1949-1954
W.D. Russell Hunter	1955-1963
Alan C. Crundwell	1963
Basil W. Ribbons	1964-1977
Eric W. Curtis	1978-1983
Ronald M. Dobson	1984-1995
J. Roger Downie	1996-2001

Elizabeth Conacher	1979
Margaret McLaughlin	1980-1981
Richard Sutcliffe	1981-1988
Norman Grist	1989-1991
Jean Millar	1992-1996
Morag McKinnon	1997-1998
Kirsty Kennedy	1999-

Secretaries

Jean Craig and Phyllis Woodland	1945-1955
Margaret McColm	1956-1957
Charles Morrison	1957-1959
Mrs A. Cross	1960-1961
Alfred Percy	1962-1967
John Scobie	1968-1972
Elizabeth Conacher	1973-1975
Agnes Walker	1976-1978

Treasurers

Robert Johnstone	1945-1956
Alexander Kennedy	1957-1961
Gerald Rodway	1962
Allan McG. Stirling	1963-1972
Peter Macpherson	1973-1977
Donald Clarke	1978-1981
Mrs E.L.S. Lindsay	1982-1989
Robert Gray	1990-1997
William Parkes	1998
Morag McKinnon	1999-